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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,556	01/04/2001	Nimrod Megiddo	ARC9-2000-0138-US1	1847
33360	7590	03/31/2005	EXAMINER	
MARK D. MCSWAIN IBM ALMADEN RESEARCH CENTER, IP LAW DEPT. 650 HARRY ROAD CHTA/J2B SAN JOSE, CA 95120			KYLE, CHARLES R	
			ART UNIT	PAPER NUMBER
			3624	
DATE MAILED: 03/31/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/753,556	MEGIDDO, NIMROD	
	<b>Examiner</b>	<b>Art Unit</b>	
	Charles R Kyle	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/04/2001</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the claims recite in various forms that a client transactional model is constructed from received parameters "said transactional model indicating a likelihood of a client's participation in a transaction". The Examiner has reviewed Applicant's specification thoroughly to find how determination of the likelihood of participation is made. The Summary of the Invention contains the sole occurrence of the word "likelihood" and the rest of the specification is similarly bereft of explanation of the concept of determining a likelihood of participation using received parameters.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 recite the limitation "said received parameters." There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "said received parameters." There is insufficient antecedent basis for this limitation in the claim.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8 recites the limitation "constructing a broker's profit function of said received parameters." The phrasing seems to suggest that the parameters are used in calculation of a broker's profit, but this is not clear from the claim language.

The Claims have been examined to the best of the Examiner's ability given the state of the Claims.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1-8 and 13-17** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The

phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In Toma, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in State Street Bank & Trust Co. v. Signature Financial Group, Inc. never addressed this prong of the test. In State Street Bank & Trust Co., the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See State Street Bank & Trust Co. at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See State Street Bank & Trust Co. at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, State Street abolished the Freeman-Walter-Abele test used in Toma. However, State Street never addressed the second part of the analysis, i.e., the "technological arts" test established in Toma because the invention in State Street (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the Toma test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001), non-precedential but cited for its reasoning.

In the present application, Claims 1-8 and 13-17 have no connection to the technological arts. None of the method steps indicate any connection to a computer or technology. The steps could be performed manually including no or trivial use of technology. The system Claims recite no particular technology; a business system can comprise only non-technological means. Therefore, the claims are directed towards non-statutory subject matter. To overcome this rejection the Examiner recommends that Applicant amend the claims to better clarify which of the elements are within the technological arts, such as incorporating a computer network or electronic network into performance of the steps or clarification that system means are based in computer technologies.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-4, 6 and 8-17** are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,868,400 *Sundaresan et al.*

**As to Claim 1**, *Sundaresan* discloses the invention as claimed, including in a method of brokering sales between parties, steps of:

- a) receiving request for broker's services from a client (Fig. 6, ele. 44; Col. 9, lines 33-46);
- b) requesting transactional information from said client for said brokered services (Figs. 7-10; Col. 9, line 47 to Col. 10, line 31);
- c) constructing a client transactional model from said received parameters (Col. 4, line 44 to Col. 5, line 2), said client transactional model indicating a likelihood of said client's participation in a transaction (Col. 14, lines 28-30; completion of form detailing attributes indicates "likelihood" of participation);
- d) identifying potential second parties to said transaction (Col. 14, lines 30-32); and
- e) eliciting participants to said transaction from said identified second parties (Col. 8, lines 26-46), whereby said transaction is structured to maximize spread (Col. 13, lines 8-17; Col. 14, line 64 to Col. 15, line 13).

**With respect to Claim 2,** *Sundaresan* discloses presentation of a modeled transaction to a client, acceptance indicating suitable parameters at Figs. 11 and 12.

**With respect to Claim 3,** *Sundaresan* discloses reworking a model and repetition at Fig. 8, "Please select your preferences below. The preferences will help us to select a better deal for you. You can change and refine these later."

**With respect to Claim 4,** *Sundaresan* discloses a client/buyer at Col. 9, line 26+.

**As to Claim 6,** *Sundaresan* further discloses:



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constructing a workable deal model responsive to said transactional model (Col. 4, lines 52-60);

identifying deals likely to be accepted by said client and at least one identified second party responsive to said transactional model and said workable deal model (Col. 6, line 60 to Col. 7, line 8); and

presenting (Fig. 14B, ele. 102; Col. 15, lines 19-26) identified deals having the largest spread to said client and each said identified second party (Col. 4, lines 60-61).

**Concerning Claim 8**, *Sundaresan* further discloses:

constructing a broker's profit function (Col. 15, line 13-15);

employing a global optimization search for identifying a feasible deal that maximizes spread (Col. 15, lines 9-13); and

presenting proposed deals to said client and identified second parties (Col. 4, lines 60-61).

**With respect to Claims 9-12**, they are computer readable code means forms of Claims 1, 2, 6 and 8 and are rejected in a like manner. *Sundaresan* discloses computer systems comprising such means at Col. 9, lines 26-46, at least.

**Regarding Claims 13-17**, they are system forms of Claims 1, 2, 6, 7 and 8 respectively and are rejected in a like manner.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 5 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,868,400 *Sundaresan et al.*

**With respect to Claim 5**, *Sundaresan* does not specifically disclose that the client is a seller. Official Notice is taken that seller driven transactions were old and well known at the time of the invention. For example, broadcast of seller offers of sale items was commonly done. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify *Sundaresan* to include a seller offer feature to broaden a seller's market.

**Concerning Claim 7**, see the discussion of Claim 6. *Sundaresan* further discloses several deal models (Col. 7, lines 3-24) of which the deal model producing maximum spread (\$170) is selected. *Sundaresan* discloses at Col. 7, lines 9-24 that an allocation of this spread is made among the buyer, seller and trading system (broker). Official Notice is taken that it was old and well known for brokers to attempt to maximize their profits on deals so as to realize greatest revenue for themselves. It is within the metes and bounds of *Sundaresan* that the allocation of spread to seller and buyer is 0%, and 100% to the broker, thus reducing minimization of profit; buyer and seller would still be satisfied, have received mutually agreeable deals. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify *Sundaresan* to maximize revenue from spread to brokers to maximize their profits.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R Kyle whose telephone number is (703) 305-4458. The examiner can normally be reached on M-F 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent A Millin can be reached on (703) 308-1065. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Crk  
March 24, 2005

Examiner Charles Kyle

A handwritten signature in cursive script, appearing to read "Charles Kyle", written in black ink.